

## END BONNETS FOR SHELL AND TUBE DX EVAPORATOR

### CLAIMS

What is claimed is:

1. Two flanged bonnets for a shell and tube evaporator.
2. A first flow-reversing bonnet mounted on one end of a shell and tube evaporator and a second flow-reversing bonnet mounted on the other end of a shell and tube evaporator at the respective tube sheets.
3. One of said first and second bonnets with a refrigerant inlet and one of said first and second bonnets with a refrigerant discharge outlet.
4. A plurality of horizontal ribs, at least one of said ribs mounted in each of said first and second bonnet compartments between the respective flange and bonnet inner surface. A perpendicular vertical plate between the two adjacent horizontal baffles or between horizontal baffle and the inner surface of the bonnet resulting in a cavity between the flange and the said vertical plate.
5. A bonnet as claimed in claim 4 wherein each of said cavity (sub chamber) has a cross-sectional area substantially equal to the cross-sectional area of the tubes leading into the sub chamber.
6. A bonnet as claimed in claim 1 wherein said bonnets are elliptical or

hemispherical in shape.

7. A bonnet as claimed in claim 1 wherein said refrigerant inlet and outlet are on the same bonnet.

8. A bonnet as claimed in claim 1 wherein said refrigerant inlet and outlet are not on the same bonnet.